

Such fighting between nesting females is possibly a mechanism for regulating population size possibly by causing emigration or affecting reproduction.

REFERENCE

- Lin, Norman. 1963. Territorial behavior in the cicada killer wasp *Sphecius speciosus* (Drury) (Hymenoptera: Sphecidae) I. Behaviour 20: 115-133.

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THREE STONEFLIES (PLECOPTERA) FROM  
CAPE THOMPSON, ALASKA<sup>1</sup>

By STANLEY G. JEWETT, JR.<sup>2</sup>

Among the large collections of invertebrates secured during 1959, 1960 and 1961 by General Electric Company biologists assigned to Project Chariot<sup>3</sup> near Cape Thompson, Alaska, are several score stonefly nymphs and adults. These were sent to me for identification<sup>4</sup> and include the three species recorded below.

The streams where the specimens were collected are situated in an arctic tundra environment. Collecting sites on Ogotoruk Creek are about nine miles inland from the coast, and on the Kukpuk River, about fifteen miles inland northeast from the mouth of Ogotoruk Creek. Keeseemalowk Creek runs parallel to Ogotoruk Creek and enters the sea about four miles southeast of Ogotoruk Creek.

Specimens are deposited in the collections of the United States

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<sup>2</sup> 7742 S.E. 27th Avenue, Portland 2, Oregon.

<sup>3</sup> A proposal of the United States Atomic Energy Commission's Plowshare Program which involves testing nuclear explosives for harbor and channel excavation. The project site is at the mouth of Ogotoruk Creek (Weichold, 1962).

<sup>4</sup> I am grateful to Jared J. Davis, formerly of Hanford Laboratories of General Electric Company, for sending the material to me for study.

National Museum (USNM), California Academy of Sciences (CAS), Hanford Laboratories (HL), and the writer (SGJ).

*Nemoura arctica* Esben-Petersen

Ricker (1952, p. 36) records this species from Alaska to Hudson Bay, south to Churchill, Manitoba.

Judging from abundant nymphal material this species is common in Ogotoruk Creek. Wings of the adults vary in length but none extends less than to the end of the abdomen. Wings of some of the female specimens are fully developed.

The material contains many score nymphs of various sizes and the following adult specimens from Ogotoruk Creek and adjacent headwater ponds: 1♂ 2♀♀, 21 June, 1960, D. G. Watson (SGJ); 1♂ 1♀, 28 June, 1960, W. C. Hanson (HL); 2♀♀, 29 June, 1960, D. G. Watson (USNM); 1♀, 30 June, 1961, J. J. Davis (USNM); 2♂♂ 2♀♀, 25 June, 1960, D. J. Watson (CAS, SGJ).

*Capnia ogotoruka*, n. sp.

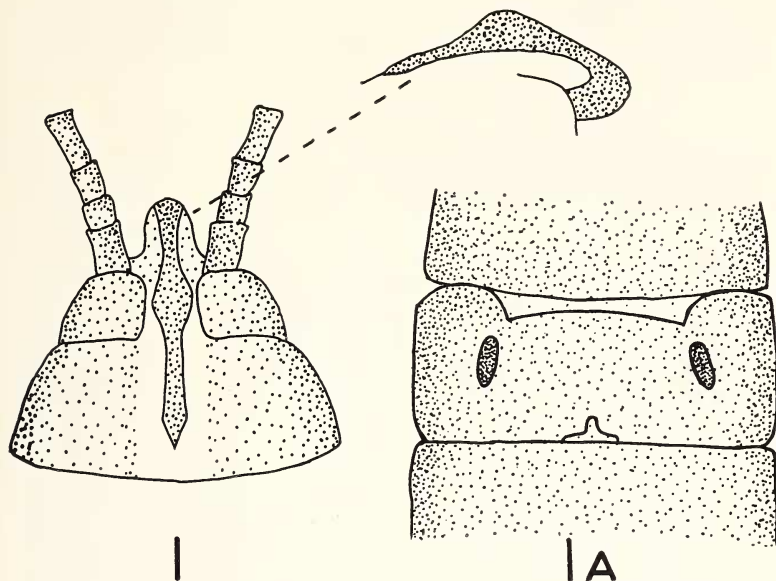
Coloration and structural details typical for genus.

*Male*.—Length of body, 6.5–7.5 mm., wings, 8–10 mm. Body and appendages heavily sclerotized, dark brown on upper surfaces, lighter below. First 9 abdominal segments without special modification; 9th sternite without a lobe; no prominent humps or knobs on any tergites, low humps on 9th; light, medium, narrow stripe across first 9 tergites. Supra-anal process, Figure 1, reflexed, reaching nearly across tergite 9, slightly thickened midway in its length in both dorsal and lateral view, the tip with sharp median projection.

*Female*.—Similar in general features to the male but somewhat larger. Subgenital plate recessed, Figure 1A, with a broadly-rounded apical portion. There is a pair of large, oval, darkly-pigmented areas on the sternite at either side of the plate.

*Types*.—*Holotype* male and one *paratype* male, Ogotoruk Creek (Upper Station), Cape Thompson, Alaska, 28 July, 1960, W. C. Hanson (USNM). *Allotype* female, Ogotoruk Creek (Pond 4), Cape Thompson, Alaska, 20 Sept., 1961, R. Adee (USNM). Additional *paratypes* as follows: Mouths of Ogotoruk and Keeseemalok Creeks, 2♂♂ 2♀♀, 1 August, 1961, J. J. Davis (HL & SGJ); Upper Station, Ogotoruk Creek, male, 30 June, 1961, J. J. Davis (SGJ); Ogotoruk Creek, 2♂♂, 6 Aug., 1961 (CAS).

*Discussion*.—This species is near *C. projecta* Frison and *C. oenone* Neave, differing from both principally in the shape of the



male supra-anal process. It goes to *C. oenone* Neave in couplet 24 in my key to the males of *Capnia* found in the Pacific Northwest (1959, p. 43) but differs from that species in being slightly smaller and in having a differently shaped supra-anal process, particularly in dorsal view.

*Arcynopteryx compacta* MacLachlan

A single female specimen of this northern species was taken along the shore of the Kukpuk River, June 23, 1961, by W. C. Hanson (USNM). The species is transcontinental in the arctic region (Ricker, 1952, p. 70).

REFERENCES

- Jewett, S. G., Jr.** 1959. The Stoneflies (Plecoptera) of the Pacific Northwest. Oregon State Monographs, Studies in Entomology, Number 3, Corvallis, Oregon.
- Ricker, Wm. E.** 1952. Systematic Studies in Plecoptera. Indiana University Publications, Science Series No. 18, Indiana University, Bloomington, Indiana.
- Weichold, B.** (Editor). 1962. Bioenvironmental Features of the Ogotoruk Creek Area, Cape Thompson, Alaska. United States Atomic Energy Commission, TID-17226. Office of Technical Services, Department of Commerce, Washington 25, D. C.